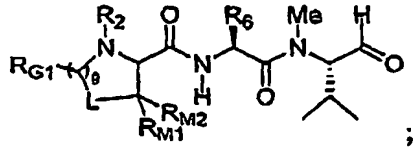
AMENDED CLAIMS

[received by the International Bureau on 13 SEP 2005 (13.09.05);

original claim 53 remains unchanged;
original claim 46 has been replaced by amended claim 46;
original claims 45, 47-52 and 54-61 have been cancelled;
claims 62-81 are new.

46. An intermediate having the structure:



;

wherein g is 1, 2, 3 or 4;

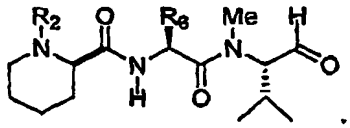
R_2 is hydrogen, or a substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl, heteroalkyl, -alkyl(aryl) or acyl moiety;

R_6 is substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl;

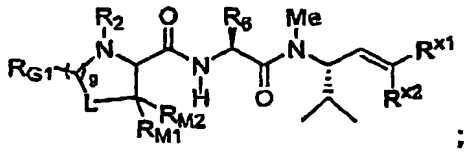
L is $CR_{L1}R_{L2}$, S, O or NR_{L3}, wherein each occurrence of R_{L1}, R_{L2} and R_{L3} is independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety;

each occurrence of R_{G1}, R_{M1} and R_{M2} is each independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; and wherein any two adjacent R_{L1}, R_{L2}, R_{L3}, R_{G1}, R_{M1} or R_{M2} groups, taken together, form a substituted or unsubstituted alicyclic or heteroalicyclic moiety containing 3-6 atoms or an aryl or heteroaryl moiety.

53. The intermediate of claim 46 having the structure:



62. An intermediate having the structure:



;

wherein R^{x1} and R^{x2} are independently hydrogen, aliphatic, alicyclic or aryl;
g is 1, 2, 3 or 4;

L is $CR_{L1}R_{L2}$, S, O or NR_{L3}, wherein each occurrence of R_{L1}, R_{L2} and R_{L3} is independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety;

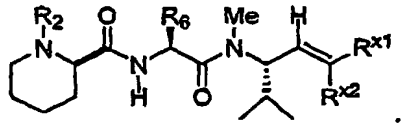
each occurrence of R_{G1}, R_{M1} and R_{M2} is each independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; and

wherein any two adjacent R_{L1}, R_{L2}, R_{L3}, R_{G1}, R_{M1} or R_{M2} groups, taken together, form a substituted or unsubstituted alicyclic or heteroalicyclic moiety containing 3-6 atoms or an aryl or heteroaryl moiety;

R_2 is hydrogen, -(C=O)R_C or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; wherein each occurrence of R_C is independently hydrogen, OH, OR_D, or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; wherein R_D is an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; and

R_6 is hydrogen, -(C=O)R_E or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety, wherein each occurrence of R_E is independently hydrogen, OH, OR_F, or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; wherein R_F is an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety.

63. The intermediate of claim 62 having the structure:



64. The intermediate of claim 62 or 63 wherein R^{x1} and R^{x2} are independently hydrogen, alkyl or aryl.

65. The intermediate of claim 62 or 63 wherein R^{x1} and R^{x2} are each hydrogen.

66. The intermediate of any one of claims 46, 53, 62 and 63 wherein R_2 is hydrogen, or a substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl, heteroalkyl, -alkyl(aryl) or acyl moiety.

67. The intermediate of claim 66 wherein R_2 is methyl, ethyl, propyl, butyl, pentyl, *tert*-butyl, *i*-propyl, -$CH(CH_3)Et$, -$CH(CH_3)CH_2CH_2CH_3$, -$CH(CH_3)CH_2CH_2CH_2CH_3$, -$CH_2CH(CH_3)_2$, -$CH(CH_3)CH(CH_3)_2$, -$C(CH_3)_2Et$, -$CH(CH_3)$cyclobutyl, -$CH(Et)_2$, -$C(CH_3)_2C{\equiv}CH$, cyclohexyl, cyclopentyl, cyclobutyl or cyclopropyl.

68. The intermediate of claim 66 wherein R_2 is methyl, ethyl, propyl or *i*-propyl.

69. The intermediate of any one of claims 46, 53, 62 and 63 wherein R_6 is methyl, ethyl, propyl, butyl, pentyl, *tert*-butyl, *i*-propyl, -$CH(CH_3)CH_2CH_3$, -$CH_2CH(CH_3)_2$, cyclohexyl, cyclopentyl, cyclobutyl or cyclopropyl; and R_2 is methyl, ethyl, propyl, butyl, pentyl, *tert*-butyl, *i*-propyl, -$CH(CH_3)Et$, -$CH(CH_3)CH_2CH_2CH_3$, -$CH(CH_3)CH_2CH_2CH_2CH_3$, -$CH_2CH(CH_3)_2$, -$CH(CH_3)CH(CH_3)_2$, -$C(CH_3)_2Et$, -$CH(CH_3)$cyclobutyl, -$CH(Et)_2$, -$C(CH_3)_2C{\equiv}CH$, cyclohexyl, cyclopentyl, cyclobutyl or cyclopropyl.

70. The intermediate of claim 69 wherein R_6 is *tert*-butyl.

71. The intermediate of any one of claims 46, 53, 62 and 63 wherein R_{G1} is hydrogen, substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl or substituted or unsubstituted phenyl.

72. The intermediate of claim 71 wherein R_{G1} is hydrogen, methyl or phenyl.

73. The intermediate of claim 71 wherein R_{G1} is hydrogen.

74. The intermediate of any one of claims 46, 53, 62 and 63 wherein R_{M1} and R_{M2} are each independently hydrogen, hydroxyl, a substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl moiety; a substituted or unsubstituted phenyl moiety, or R_{M2} is absent when R_{M1} and the

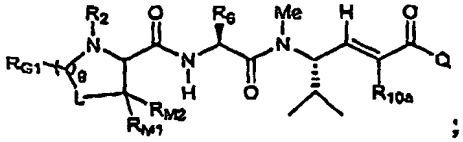
substitutents on L, taken together, form a substituted or unsubstituted aryl or heteroaryl moiety.

75. The intermediate of claim 74 wherein R_{M1} and R_{M2} are each hydrogen.

76. The intermediate of any one of claims 46, 53, 62 and 63 wherein L is $CR_{L1}R_{L2}$ wherein R_{L1} and R_{L2} are each independently hydrogen, substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl or substituted or unsubstituted phenyl.

77. The intermediate of claim 76 wherein L is CH_2.

78. A method for preparing a compound of formula VI^A:

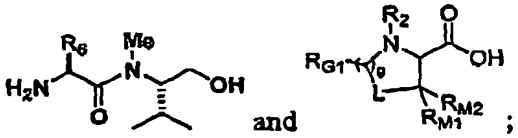


;

(VI^A)

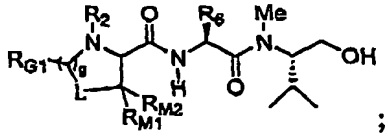
said method comprising steps of:

(a) reacting two compounds having the structures:



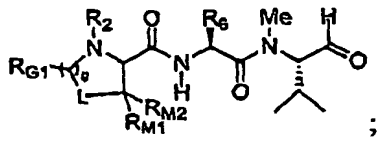
;

under suitable conditions to form a compound having the structure:



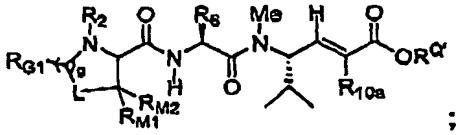
;

(b) oxidizing the compound formed in step (a) under suitable conditions to form a compound having the structure:



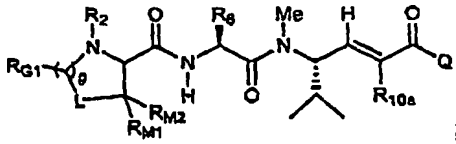
;

(c) subjecting the compound formed in step (b) to suitable olefin-forming conditions to form a compound having the structure:



;

(d) subjecting the compound formed in step (c) to suitable diversification reactions to generate the desired compound having the structure:



;

(VI^A)

wherein g is 1 or 2;

$R^{Q'}$ is hydrogen, lower alkyl or an oxygen protecting group;

R_2 and R_6 are independently substituted or unsubstituted linear or branched lower alkyl;

R_{10a} is hydrogen or substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl;

L is $CR_{L1}R_{L2}$, S, O or NR_{L3}, wherein each occurrence of R_{L1}, R_{L2} and R_{L3} is independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety;

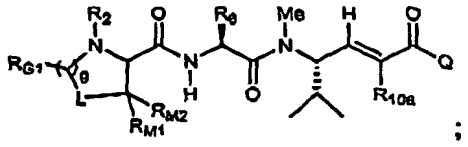
each occurrence of R_{G1}, R_{M1} and R_{M2} is each independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; and

wherein any two adjacent R_{L1}, R_{L2}, R_{L3}, R_{G1}, R_{M1} or R_{M2} groups, taken together, form a substituted or unsubstituted alicyclic or heteroalicyclic moiety containing 3-6 atoms or an aryl or heteroaryl moiety.

79. The method of claim 78 wherein, in the step of oxidizing, the conditions comprise Swern or Dess Martin oxidizing conditions.

80. The method of claim 78 wherein, in step (c), the olefin-forming conditions comprise $Ph_3P{=}C(R_{10a})CO_2R^{Q'}$; wherein $R^{Q'}$ is hydrogen, lower alkyl or an oxygen protecting group; and R_{10a} is as defined generally above and in classes and subclasses herein.

81. A method for preparing a compound of formula VI^A:

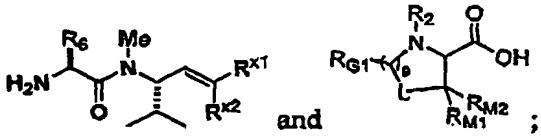


;

(VI^A)

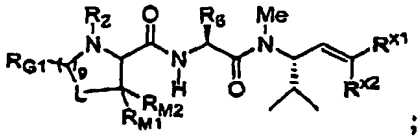
said method comprising steps of:

(a) reacting two compounds having the structures:



;

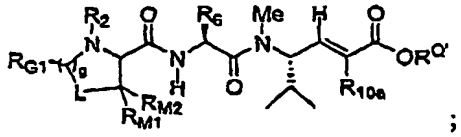
under suitable conditions to form a compound having the structure:



;

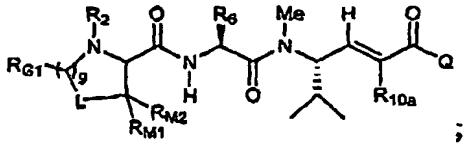
wherein R^{X1} and R^{X2} are independently hydrogen, alkyl, heteroalkyl, aryl or heteroaryl;

(b) converting the compound formed in step (a) under suitable conditions to form a compound having the structure:



;

(c) subjecting the compound formed in step (b) to suitable diversification reactions to generate the desired compound having the structure:



;

(VI^A)

wherein g is 1 or 2;

$R^{Q'}$ is hydrogen, lower alkyl or an oxygen protecting group;

R_2 and R_6 are independently substituted or unsubstituted linear or branched lower alkyl;

R_{10a} is hydrogen or substituted or unsubstituted, linear or branched, cyclic or acyclic, or saturated or unsaturated lower alkyl;

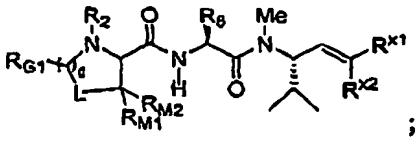
L is $CR_{L1}R_{L2}$, S, O or NR_{L3}, wherein each occurrence of R_{L1}, R_{L2} and R_{L3} is independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety;

each occurrence of R_{G1}, R_{M1} and R_{M2} is each independently hydrogen or an aliphatic, alicyclic, heteroaliphatic, heteroalicyclic, aryl or heteroaryl moiety; and

wherein any two adjacent R_{L1}, R_{L2}, R_{L3}, R_{G1}, R_{M1} or R_{M2} groups, taken together, form a substituted or unsubstituted alicyclic or heteroalicyclic moiety containing 3-6 atoms or an aryl or heteroaryl moiety.

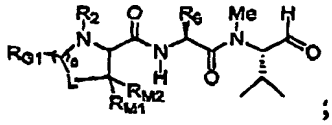
79. The method of claim 81 wherein the step of converting comprises steps of:

(i) subjecting the compound having the structure:



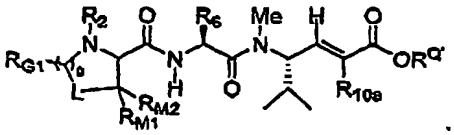
;

to ozonolysis conditions to form an aldehyde having the structure:



; and

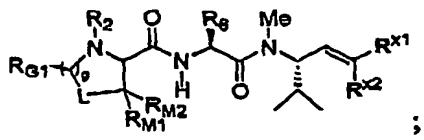
(ii) subjecting the compound formed in step (i) to suitable olefin-forming conditions to form a compound having the structure:



80. The method of claim 81 wherein, in step (ii), the olefin-forming conditions comprise $Ph_3P{=}C(R_{10a})CO_2R^{Q'}$; wherein $R^{Q'}$ is hydrogen, lower alkyl or an oxygen protecting group; and R_{10a} is as defined generally above and in classes and subclasses herein.

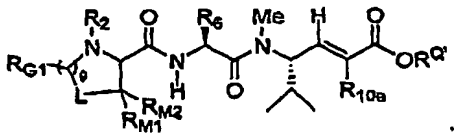
81. The method of claim 81 wherein, the step of converting comprises a step of:

subjecting the compound having the structure:



;

to cross-olefin-metathesis conditions in the presence of $CH_2=C(R_{10a})CO_2R^{Q'}$ to form a compound having the structure:



STATEMENT UNDER ARTICLE 19(1)

Applicant respectfully submits that no new matter is presented with the amendment set forth in the "Letter for PCT Article 19 Amendment of Claims" filed concurrently herewith. Specifically, support for claims 62-65 can be found *inter alia* in Scheme 14 page 105 of the specification as originally filed. Claims 66-68 find support, for example, in paragraph [0124] page 107 of the specification. Claims 69-70 find support, for example, in paragraph [0122] page 106 of the specification. Support for claims 71-77 can be found, for example, in sections d)-j) on page 28 and sections d) and e) on page 29 of the specification. Finally, new claims 62-81 find support *inter alia* in paragraphs [0106]-[0114] on pages 100-104 of the specification as filed.

Applicant respectfully requests entry and consideration of this amendment in processing the application.